A CROSS SECTIONAL STUDY TO ESTIMATE THE PREVALENCE OF EARLY INITIATION OF BREASTFEEDING AMONG MOTHERS IN A ZONE OF CHENNAI CITY

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CERTIFICATE

This is to certify that the dissertation entitled **"A CROSS SECTIONAL STUDY TO ESTIMATE THE PREVALENCE OF EARLY INITIATION OF BREASTFEEDING AMONG MOTHERS IN A ZONE OF CHENNAI CITY"** is a bonafide work done by **Dr.J.ANAIAPPAN** Post Graduate student in the Institute of Community Medicine, Madras Medical College, Chennai, under my supervision and guidance towards partial fulfilment of the requirement for the degree of M.D.BRANCH XV COMMUNITY MEDICINE and is being submitted to The Tamilnadu Dr.M.G.R. Medical University, Chennai.

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INTRODUCTION

BREASTFEEDING is the most effective method of promoting the health of infants. It's God's gift to human beings. Breastfeeding is a most valuable natural resource and is of utmost importance to prevent disease and to promote child survival. Yet, it is not been practised universally. It leads to infections which causes high mortality and morbidity. It also causes malnutrition and huge economic loss to the country.[1, 2]

Early initiation of breast feeding and exclusive breastfeeding are now being recognized as the most effective strategy for improving child survival. In a developing country like India, the Infant mortality rate, Neonatal mortality rate, Under-five mortality rate and the prevalence of under nutrition are very high.[3] The promotion of early initiation and exclusive breastfeeding will be an extremely efficient strategy in improving infant and child survival. This will help us to reduce the Infant mortality rate, Neonatal mortality rate, Under-five mortality rate and under nutrition and thereby saving the life of children.[4]

However, the most recent observation is that the **early initiation of breastfeeding within first one hour** is very essential for improving survival of the newborn babies and to reduce the neonatal mortality. The international agencies like World Health organization (WHO), United Nations Childrens Emergency Fund (UNICEF), World Alliance for Breastfeeding and Action (WABA) and International Baby Food Acton Network (IBFAN) and the Breastfeeding Promotion Network of India (BPNI) are increasingly stressing the need for early initiation of breastfeeding within first one hour for saving the life of newborn babies and protecting them from infections which are the main cause of neonatal mortality.

This was the theme of world breastfeeding week for the year 2007. **BREASTFEEDING: THE FIRST ONE HOUR – SAVE ONE MILLION BABIES!**[5]

In India, eleven lakh babies die during the first month of life and another five lakh during 2-12 months of age[6]. Majority of the deaths occur due to suboptimal feeding practises. More than 15% of 24 lakh child deaths in India could be averted if optimal feeding practises are scaled upto 90%.[7,8]

Early initiation of breastfeeding improves survival of the new born and helps to reduce Infant mortality rate, Neonatal mortality rate and Under-five mortality rates. It can be rightly called as the "**fourth stage of labour"** which includes putting the baby to breast after birth and ensuring the intake of colostrum by the neonate. The exact time of initiation of breastfeeding has been suggested right from birth in the delivery room itself to within one hour after delivery. It can also be considered as the "**first stage of exclusive breast feeding"** since it enhances the chance of exclusive breastfeeding subsequently upto six months of age.[9,10]

Early initiation of breastfeeding - why?

- During the first one hour the baby is active and ready to suckle the breast.
- The baby learns to recognize the mothers smell and the process of emotional bonding begins.
- Early initiation ensures the intake of colostrum, the first feed and first immunization for the baby.
- Early initiation enhances the chance of exclusive breastfeeding later.

- The skin to skin contact prevents hypothermia.
- The mother secretes oxytocin which enhances the flow of milk. Oxytocin also causes uterine involution and reduces postpartum haemorrhage and thereby reduces Maternal mortality rate.
- The mother's commensal bacteria starts colonizing the gut and skin of the baby
- It prevents the problem of breast engorgement.[11,12,13]

OBJECTIVES

- To estimate the prevalence of early initiation of breastfeeding (within first one hour of birth) among urban mothers

- To assess the factors associated with non-initiation of breast feeding within one hour of birth.

JUSTIFICATION OF THE STUDY

Early initiation of breastfeeding is not only a key intervention to improve the health and survival of neonates; it is now seen as a child's right.

- This study is relevant, since breastfeeding is of major public health intervention and it is an important component of essential newborn care.

- Early initiation of breastfeeding is seen as an important step to reduce Neonatal Mortality Rate, Infant Mortality Rate and Under-five mortality rate. It also enhances the chance of exclusive breastfeeding thereby reducing the burden of malnutrition and promoting child survival.

- One of the Millennium Development Goal is to reduce the Under-five mortality rate by two thirds of the existing levels which can be achieved through early initiation.

- The reasons for the non initiation of breastfeeding within first one hour of birth have to be found out, so that remedial measures can be taken.

- Lack of studies on prevalence of early initiation of breastfeeding in urban population in Chennai.

REVIEW OF LITERATURE

INITIATING BREASTFEEDING WITHIN ONE HOUR OF BIRTH:

Initiating breastfeeding within one hour of birth is one of the ten Steps to achieve successful breastfeeding on which the Baby Friendly Hospital Initiative (BFHI) was based and launched in 1992. Step 4 was to **"Help mothers to initiate breastfeeding within half-hour of birth."**[14]

Evidence for the ten steps to successful breastfeeding is as, "Mothers in the maternity ward who have had normal vaginal deliveries should confirm that within half-hour of birth they were given their babies to hold with skin contact, for at least 30 minutes and offered help by a staff member to initiate breastfeeding. At least 50% of mothers who have had caesarean deliveries should confirm that within half-hour of being able to respond, they were given their babies to hold with skin contact."[15]

Current commitments:

World leaders at the United Nations Millennium Summit in September 2000 agreed on a critical goal to reduce deaths of Under-five children by two thirds by 2015 - MDG-4 (Millennium Development Goal). This cannot be achieved without halving newborn deaths, which now comprise 40% of all Under-five deaths.[16]

It is estimated that out of the 136 million babies born every year, 4 million newborn deaths occur every year. Almost all of the four million newborn deaths are due to preventable causes, with the majority of them attributed to infections. Sepsis, meningitis and pneumonia annually kill almost 1.1 million neonates every year, majority of which occur in low and middle income countries. Emphasis is now on wide-scale implementation of proven and cost-effective measures which are required to save both the mother's and newborn's lives.[17, 18]

Neonatal deaths are the main barrier to attain the Millennium Development Goal-4. MDG-4 can be achieved only if the neonatal deaths are addressed. This necessitates both maternal and child health interventions. In any country, the rural areas and poor families have the highest risk for newborn deaths.[19, 20]

The promotion of early initiation of breastfeeding has the potential to make a major contribution to achieve the Millennium Development Goal for Under-five mortality. There is an urgent need for policy changes in every country to improve promotion, coverage and reporting of early initiation as well as exclusive breastfeeding, at all levels; global, national and sub national.

The findings of the Ghana study, which clearly showed for the first time in the world, that ensuring initiation of breastfeeding within one hour could prevent 22% of all neonatal deaths irrespective of whether they were exclusively breastfed or not. Early initiation is the first and most vital step towards reducing infant and Under-five mortality, by reducing the overwhelmingly high neonatal mortality rate. This survival benefit has been demonstrated to be independent of exclusive breastfeeding.

The Ghana study also explained the "Potential Mechanisms". Early initiation of breastfeeding could affect neonatal mortality risk by at least four mechanisms. The lower rate of mortality in those who initiated breastfeeding early occurred because,

- Mothers who suckle their babies shortly after birth have a greater chance of successfully establishing and sustaining breastfeeding throughout infancy.

- Early feeding with non-human milk proteins may severely disrupt normal gut function.

- Early human milk is rich in a variety of immune and non-immune components that are important for early gut growth and resistance to infection.

- Promotion of warmth and protection may reduce the risk of death from hypothermia.[21,22]

A study to determine the global impact of increase in breastfeeding coverage and promotion of early initiation in less developed settings, was able to project the absolute numbers of lives that could be saved and the proportion of neonatal deaths which could be avoided if 99% of infants were initiated on breastfeeding during the first hour or during the first day of life. In global terms, **over one million lives could be saved if all newborns younger than one month were breastfed within the first hour of life.**[23]

Global Strategy for Infant and Young Child Feeding by World health Organization / United Nations International Childrens Emergency Fund, states that two thirds of the under-five deaths occur during infancy and they are mostly due to sub-optimal feeding practises. It also recommends that children be breastfed exclusively for first six months of life and then the breastfeeding is continued with adequate complementary food upto two years of life.[24]

In Lancet's child survival series in 2003 and 2004, it was estimated that breast feeding alone, if universalized, could reduce Under-five mortality by 13% globally. It was subsequently estimated that in India this figure could be 16%. The fact that two thirds of all the under five deaths occur during first one year and the fact that they are related to sub-optimal feeding reinforces the need to begin breastfeeding within first one hour. Early initiation is the way to achieve exclusive breastfeeding for the first six months and optimal feeding practises later. Mothers who suckle their babies immediately after birth have a greater chance of establishing exclusive breastfeeding without difficulty and sustaining it throughout infancy.[25, 26]

A global ecological risk assessment of deaths and years of life lost due to suboptimal breastfeeding among children in the developing world revealed that attributable fractions for deaths due to diarrheal disease and lower respiratory tract infections are 55% and 53%, respectively, for the first six months of infancy, 20% and 18% for the second six months, and are 20% for all-cause deaths in the second year of life. Globally, as many as 1.45 million lives (117 million years of life) are lost due to suboptimal breastfeeding in developing countries.[27]

Another study to determine the global impact of increases in coverage and promotion of early initiation of breastfeeding in less developed settings was able to project the absolute numbers of lives that could be saved and the proportion of neonatal deaths that could be prevented if 99% of infants were initiated on breastfeeding during the first hour or during the first day of life. For all countries combined, it was estimated that neonatal mortality could be reduced by 24% if 99% of infants were initiated on breastfeeding on day 1 of life and by 31% if 99% of initiation was done within the first hour of life.

A study from Latin America based on Attributable fraction analysis of the national data on infant mortality and breast feeding stated that 55%

of the deaths due to diarrhoeal illness & acute respiratory infections could be prevented by following exclusive breastfeeding in 0-3 months and partial breast feeding for the rest of the first year. 66% of deaths due to these causes could be prevented by exclusive breastfeeding in infants aged 0-3 months and 32% of such deaths could be prevented in infants aged 4-11months. Early initiation of breastfeeding is an important step to establish and promote exclusive breast feeding in an infant there by reducing the deaths due to diarrhoea and acute respiratory tract infections.[28]

Mothers need to be supported for achieving both contact and suckling which are so closely interrelated. It has an important bearing on survival and development of babies. It has been observed that the suckling reflex of the newborn is at its height in the initial twenty to thirty minutes after birth. If the infant is not breastfed during this period, then the reflex diminishes rapidly only to reappear adequately forty hours later.[29] So early initiation can rightly be called **"The fourth stage of labour"** which includes putting the baby to breast after birth and ensuring the intake of colostrum by the neonate. The exact time of initiation of breastfeeding has been suggested right from birth in the delivery room

itself to within one hour after delivery. Also the antibody content of colostrum is at its maximum during the first twelve postpartum hours, which justifies early initiation.

The effect of skin-to-skin contact and suckling immediately after birth increases the median duration of breast feeding by 2 ½ months.[30] In a sample of Norwegian infants, 69% of those who were suckled at birth were still being nursed at the age of 3 months, compared to only 47% of those who were first suckled after six hours.[31]

Salariya et al also found that babies who were first fed within 30 minutes of birth were likely to remain breastfeeding for longer[27]. Furthermore, the routine administration of prelacteal feeds interferes with both the mother's confidence and hence the let-down reflex. It also interferes with the suckling stimulation and prolactin production and reduces protection from infection. [32, 33, 34]

Evidence for other benefits:

Early breastfeeding has a physiological effect on the uterus as well, causing it to contract.[35] This action would also be useful for reduction in postpartum bleeding in women. Oxytocin is known to play a role in

bonding and reduction in postpartum bleeding. It has been demonstrated that oxytocin levels increase during first 45 minutes and return to normal levels in 60 minutes.[36] It was found that sucking and hand touching by babies stimulates oxytocin release, which is significant for uterine contractions, milk ejection and mother infant relationship.[37, 38]

Another study demonstrated that early initiation of breastfeeding within an hour of birth was associated with less vaginal bleeding postpartum.[39] Thus early initiation provides benefit for both the mother and the infant. Since postpartum haemorrhage is a major cause of maternal mortality and its prevention can save mother's lives through early breastfeeding.

Indian scenario:

India is the second most populous country in the world. India has reasonably high Birth rate & high Infant Mortality Rate, Neonatal Mortality Rate and Under-five mortality rate. According to United Nations International Childrens Emergency Fund report - State of the World's Children 2006, the following statistics will give an idea of status of children in India.[40]

Total general population	1,087,124,000
Annual no. of births	26,000,000
Under five mortality rate	85 / 1000 live births
Infant mortality rate	63 / 1000 live births
Neonatal mortality rate	43 / 1000 live births
Underweight children <5yrs	47%
Exclusive breast feeding <6mths	46.9%

Two thirds of the deaths in under five year's age group occur in the first one year and they are related to suboptimal feeding. In India, eleven lakh babies die during the first month of life and another five lakh during 2-12 months of age. More than 15% of 24 lakh child deaths in India could be averted if optimal feeding practises are scaled upto 90%.[41]

According to assessment by the National Commission on Macro-Economics and Health in 2005, for core package of essential health intervention for National Rural Health Mission (NRHM) has estimated the cost of treatment of common causes of infant and child mortality. The cost of treating acute respiratory infections, diarrhoeal illness and neonatal sepsis can be significantly reduced if steps are taken to

effectively implement early initiation and exclusive breastfeeding in India. The expenditures are in US million dollars as follows:

ARI Pneumonia	34,184,386 105.14
Diarrhoea - some dehydration	34,184,386 200.51
Diarrhoea - severe dehydration	34, 184, 3955.21
Neonatal sepsis	250,000 38.04

According to NHFS-2, in India the prevalence early initiation of breast feeding was only 15.8%, which reached 37.1 percent within the first 24-hours. Only 55.2% of children of 0-3months of age and 27.3 percent of children of 4-6 months of age were exclusively breastfed.[42]

According to NFHS-3, the prevalence of early initiation of breast feeding within one hour, is 23.4% in India. It varies between different states. The highest prevalence is seen in Mizoram (65.4%), followed by Goa (59.7%). Tamilnadu stands third among the states in India and it has a prevalence rate of 58.8% which is reasonably good. The lowest rates are prevalent in Uttarpradesh (7.2%) and Bihar (4%). Though, there is a marginal increase of 7.6% in the early initiation of breast feeding in the 7 years period between NFHS-2 and NFHS-3, this figure is still very low.[43]

In a study conducted on breastfeeding practises of urban and rural mothers in India, only 21% of the urban and 35% of the rural mothers initiated breastfeeding within one hour after birth. Exclusive breastfeeding rates were 38% in urban and 57% in rural mothers.[44] Artificial milk was given in 55% of urban mothers in Delhi.[45] The prevalence of prelacteal feed was 16% mothers in the rural area. Doctor's advice for exclusive breastfeeding motivated 21% of urban mothers and 23% of rural mothers. The highest rate of formula feeds were noted in urban mothers (55%) which indicated the easy availability of formula feeds to mothers. Reinforcement by health professionals played a significant role in enhancing breastfeeding among mothers.[46]

The prevalence of early initiation of breastfeeding was better in rural mothers when compared to urban mothers. The prevalence of prelacteal feeds was observed to be higher in rural mothers when compared to urban mothers.[47, 48]

Early initiation of breastfeeding within first one hour of birth is key indicator of progress on child survival, child health and child nutrition and development. Early initiation contributes significantly to reduction of the Under-five mortality, Infant mortality and Neonatal mortality rates. It is the single most effective strategy and most cost effective economical

intervention that can save the lives of babies. **In a country like India, just by implementing this single intervention efficiently, we can save the lives of 2,50,000 babies every year.** The early initiation of breastfeeding is perceived as a way to achieve exclusive breastfeeding for the first six months and optimal feeding practices later on.[49, 50]

Within the human rights framework, Children's Right to nutrition includes their right to early initiation of breastfeeding. This right can only be fulfilled only if our mothers are entitled for skilled counselling and support both before and immediately after birth to initiate breastfeeding within first one hour and for exclusive breastfeeding upto 6 months of age, followed by continued breastfeeding for 2 years along with adequate complementary feeding.

DEFINITION

Early Initiation:

Early initiation is defined as initiation of breastfeeding within one hour after delivery.

Exclusive Breast Feeding:

Exclusive breast feeding means the infant receives only breast feeding (from his/her mother or a wet nurse or expressed breast milk) and no other liquids or complementary foods with exception of undiluted drops or syrups consisting of vitamin, mineral supplements or medicines.

Neonatal Mortality Rate:

Neonatal mortality rate is the ratio of the deaths under 28 days of age in a given year to the total number of live births in the same year, usually expressed as a rate per 1000 live births.

Infant Mortality Rate:

Infant mortality rate is the ratio of the deaths under one year of age in a given year to the total number of live births in the same year, usually expressed as a rate per 1000 live births.

Maternal Mortality Rate:

Maternal mortality rate is the ratio of the total number of female deaths due to complications of pregnancy, child birth or within 42 days of delivery from “puerperal causes” in an area in a given year to the total

number of live births in the same area and year, usually expressed as a rate per 1000 live births.

Under Five Mortality Rate:

Under-5 mortality rate is defined as the annual number of deaths of children aged under five years in a given year to the total number of live births in the same year, expressed as a rate per 1000 live births.

METHODS AND MATERIALS

Study design: Community based Cross Sectional Study.

Study area: This study was done in Zone VI in Chennai Corporation.

Study period: This study was done between January 2009 to October 2009.

Study population: Mothers who had babies born as term at birth, less than one year of age during the study period living in the study area.

Sample size: As per the NFHS-3 data, the of prevalence of early initiation of breastfeeding within first one hour is 58.8% in Tamilnadu and it is considered for calculation of sample size at 95% CI (Z=1.96) and the limit of accuracy is kept at 8% of 58.8%.

$$N = \frac{Z^2 \times pq}{D^2}$$

$$N = \frac{1.96 \times 1.96 \times 58.8 \times 41.2}{4.7 \times 4.7}$$

N = 421

P = 58.8, q = 41.2, D = 4.7, Z = 1.96

The sample size for this study was rounded of to 450 informants.

Sampling was done by simple random sampling method. The study was done in Chennai corporation area limits. Out of the ten zones in Chennai Corporation, Zone VI was selected randomly by lottery method. Among the 18 divisions in the Zone VI, 5 divisions were selected randomly by lottery method. In each division 90 mothers were selected by systematic random sampling technique and interviewed using the questionnaire.

Research instrument:

The study was done with the use of standardized pretested questionnaire in Tamil as a method of data collection. A questionnaire was constructed for this study to assess the demographic characteristics (age, educational status, occupation, religion and social class), marital

status, details of antenatal care and details of delivery and breast feeding for the present child. The questions were standardized to local social and cultural norms, values and religious beliefs. The questionnaire was pre-tested in the mothers in the same zone. Based on the observations made during the pre-testing, necessary changes were made in the questionnaire. The results of the pre-testing were not included in the final analysis.

DATA COLLECTION:

Data collection was started after obtaining permission from the Director, Institute of Community Medicine, Commissioner, Corporation of Chennai and Director, District Family Welfare Bureau. The purpose of the study was explained to the respondents after a brief introduction. The wilful respondents were interviewed and the relevant informations were obtained by using the structured questionnaire.

DATA ANALYSIS:

EPIINFO, SPSS Free trial version 14 and Microsoft excel softwares were used to analyze the data.

Following the descriptive analysis, for comparison among categorical variables Chi-square test was used. A “p” value of <0.05 was considered to be significant.

RESULTS

The study was conducted in five divisions under Zone VI of Chennai Corporation, which were randomly selected by lottery method. 450 mothers participated in the study.

This study estimated the prevalence of early initiation of breast feeding and assessed the factors associated with non-initiation of breastfeeding within first one hour of birth among mothers who had children less than one year of age.

6.1.1 Age of the respondents

The age of the respondents at the time of study ranged between 18 to 40years. The mean age was 24 years. Among the study group 83.6% of them were in the age group of 20 – 29 years, 7.6% were less than 19 years of age and 8.6% were more than 30 years of age.

Table 1. Distribution of age of the respondents

Age group (in years)	Frequency (N=450)	Percentage
≤ 19	34	7.6
20 – 29	376	83.6
≥ 30	40	8.8

6.1.2 Educational status of the mother

Among the study group, 92.9% were literate and 7.1% were illiterate. Majority of the literate in the study group, had middle and high school education (60%), 12.2% had only primary education and 9.8% were graduates.

Table 2 Education of the mother

Education	Frequency (N = 450)	Percentage
Primary School	55	12.2
Middle school	139	30.9
High school	131	29.1
Secondary School	49	10.9
Graduate	44	9.8
Illiterate	32	7.1

Figure 1. Education of the mother

6.1.3 Religious status

Among the study group, 66.9% were Hindus, 26.9% were Muslims and 6.2% were Christians.

Table 3 Religion of the mother

Religion	Frequency (N = 450)	Percentage
Hindu	301	66.9
Muslim	121	26.9
Christian	28	6.2

6.1.4 Occupation of the mother

Among the study group, 96.8% were house wives, 7% were unskilled workers and 7% were skilled workers.

Table 4 Occupation of the mother

Occupation	Frequency (N =450)	Percentage
Skilled Worker	7	1.6
Semiskilled Worker (Housewives)	436	96.8
Unskilled Worker	7	1.6

6.1.5 Socioeconomic status

Among the study group, 0.4% belonged to Upper socioeconomic status, 13.6% belonged to Upper middleclass, 43.2% belonged to Lower middleclass and 51.8% belonged to Upper lower socio economic status.

Table 5 Socioeconomic status

Socioeconomic class	Frequency (N = 450)	Percentage
Upper	2	0.4
Upper middle	61	13.6
Lower middle	154	34.2
Upper lower	233	51.8

6.1.6 Age at marriage

Among the study group, 37.1% were married below 19 years of age, 61.67% were married between 20-29 years of age and 1.3% were married above 30 years of age. Though majority of the women were married between 20-29 years of age, a significant percentage of women continue to get married under 19 years of age.

Table 6 Age at marriage

Age at marriage	Frequency (N = 450)	Percentage
≤ 19	167	37.1
20 – 29	277	61.6
≥ 30	6	1.3

6.1.7 Age at first conception

Among the study group, 28.9% had their first conception before 19 years of age, 69.8% had their first conception between 20-29 years of age and 1.3% had their first conception after 30 years of age.

Table 7 Age at first conception

Age at first conception	Frequency (N = 450)	Percentage
≤ 19	130	28.9
20 – 29	314	69.8
≥ 30	6	1.3

6.2 Awareness about early initiation of breastfeeding

Awareness about early initiation was seen in only 26.9% (121) of the respondents, while 73.1% (329) were unaware about early initiation.

Figure 8 Awareness about early initiation of breastfeeding

6.3.1 Health education about breastfeeding by health care providers

Among the study group, 41.1% (185) of the mothers were given health education about breast feeding by health care providers, while 58.9 % (265) were not given any health education during antenatal period.

Figure 2 Health education about breastfeeding by health care providers

6.3.2 Motivation for early initiation by health care providers

Among the study group, 28% (126) of the respondents had been motivated to give early initiation, while 72 % (324) were not motivated for early initiation by health care providers.

Figure 3 Motivation for early initiation by health care providers

6.4 Motivation for early initiation by family members

Among the study group, 15.3% (69) were motivated by family members for early initiation and 84.7 %(381) were not motivated by family members for early initiation.

Figure 4 Motivation for early initiation by family members

6.5 Mode of delivery

Among the study group, 60.7% (273) mothers had normal delivery, 39.1% (176) had caesarean delivery and 0.2% (1) mother had forceps delivery.

Figure 5 Mode of delivery

6.6 Person who initiated breast feeding

Among the study group, breast feeding was initiated by mother in 33.6% mothers, Auxiliary Nurse Midwife and Staff nurse initiated in 27.6% mothers. Breast feeding was initiated by doctors only in 4.4% mothers. 5.6% mothers voluntarily initiated breastfeeding themselves.

Person who initiated breast feeding	Frequency (N = 450)	Percentage
Doctor	20	4.4
ANM/Nurse	124	27.6
FNA	24	5.3
Mother	151	33.6
Mother in law	40	8.9
Sister	38	8.4
Sister in law	14	3.1
Herself	25	5.6
Others	14	3.1

Figure 6 Person who initiated breast feeding

6.7 Prevalence of early initiation of breast feeding

Among the study group, 54.4% mothers initiated breast feeding within first one hour after delivery. 40.6% mothers initiated breastfeeding between 1 – 24 hours and 4.7% mothers initiated breast feeding 24 hours after delivery.

Table 10 Early initiation of breast feeding

Early initiation of breast feeding	Frequency (N = 450)	Percentage
< 1 hour	245	54.4
1 – 24 hours	184	40.9
>24 hours	21	4.7

Figure 7 Early initiation of breast feeding

6.8 Reasons for non-initiation of breast feeding within first one hour

Among the study group, 45.6% (205) mothers did not initiate breast feeding within first one hour after delivery. In 43.9% of mothers there was delay in handing over the baby to the mother which was responsible for non initiation breast feeding within first one hour after delivery. Maternal complications such as postpartum haemorrhage, preeclampsia etc resulted in non-initiation in 19% mothers. Neonatal complications such as birth asphyxia, neonatal sepsis, neonatal seizures etc lead to non-initiation in 14.1% mothers. Caesarean section perse resulted in non initiation in 17.6% mothers.

Figure 8 Reason for non-initiation

Table 11 Reason for non-initiation

Reason for non-initiation	Frequency (N = 205)	Percentage
Delay in handing over the baby	90	43.9
Maternal illness/complication	39	19
Neonatal complication	29	14.1
Caesarean section	36	17.6
Misconception of not enough milk	11	5.4

6.9 Prelacteal feeds

Among the study group, 17.3% infants were given prelacteal feeds. 82.7% infants did not receive any prelacteal feeds.

Table 12 Prelacteal feeds

Prelacteal feeds	Frequency (N = 450)	Percentage
Yes	78	17.3
No	372	82.7

Figure 9 Prelacteal feeds

6.10.1 Education of the mother and early initiation of breastfeeding

There exists a statistical significance between the education of the mother and early initiation.

Table 13 Education of the mother and early initiation of breast feeding

Education of the mother	Upto one hour	More than one hour
Illiterate	24 (75%)	8 (25%)
Primary/Middle school	115 (59.3%)	79 (40.7%)
High/Secondary school	88 (48.9%)	92 (51.1%)
Graduate	18 (40.9%)	26 (59.1%)

$x^2 = 5.869$ p = 0.015 df = 3

Figure 10 Education of the mother and early initiation of breast feeding

6.10.2Mode of delivery and early initiation

The mode delivery definitely influences the early initiation among mothers. As it is observed from the table, 58.8% of the mothers who had normal delivery had early initiation when compared to 47.7% of mothers who had caesarean section.

Table 14 Mode of delivery and early initiation

Mode of delivery	Upto one hour	More than one hour
Normal	161 (58.8%)	113 (41.2%)
Caesarean section	84 (47.7%)	92 (52.3%)

$x^2 = 5.258$ p = 0.022 df = 1

Figure 11 Mode of delivery and early initiation

6.10.3 Person who initiated breast feeding and early initiation

Early initiation was observed in 55% of the mothers in whom the Doctors had initiated breast feeding and in 68.9% of the mothers in whom the paramedical staff had initiated breastfeeding. While the comparative figures for the mother and other relatives are 41.7% and 52.7% respectively.

Table 15 Person who initiated breast feeding and early initiation

Person who initiated breast feeding	Upto one hour	More than one hour
Doctor	11 (55%)	9 (45%)
Paramedical staff	102 (68.9%)	46 (31.1%)
Mother	63 (41.7%)	88 (58.3%)
Others	69 (52.7%)	62 (47.3%)

$x^2 = 22.525$ p = 0.000 df = 3

Figure 12 Person who initiated breast feeding and early initiation

6.10.4Awareness about early initiation and early initiation

Among the study group, 67.8% of mothers who had awareness about early initiation had practised early initiation while 49.5% 0f mothers who had no awareness had practised early initiation.

Table 16 Awareness about early initiation and early initiation

Awareness about early initiation	Upto one hour	More than one hour
Yes	82 (67.8%)	39 (32.2%)
No	163 (49.5%)	166 (50.5%)

$x^2 = 11.84$ p = 0.001 df = 1

Figure 13 Awareness about early initiation and early initiation

6.10.5 Motivation of early initiation and early initiation

Early initiation was observed in 72.2% of mothers who were motivated while it was 68.8% among mothers who were not motivated.

Table 17 Motivation of early initiation and early initiation

Motivation of early initiation	Upto one hour	More than one hour
Yes	91 (72.8%)	35 (27.8%)
No	154 (47.5%)	170 (52.5%)

$x^2 = 22.3$ p = 0.000 df = 1

Figure 14 Motivation of early initiation and early initiation

6.10.6 Prelacteal feeds and early initiation

Early initiation was observed only in 30.8% of babies who were given prelacteal feeds while it was 59.4% in babies who were not given prelacteal feeds.

Table 18 Prelacteal feeds and early initiation

Prelacteal feeds	Upto one hour	More than one hour
Yes	24 (30.8%)	54 (69.2%)
No	221 (59.4%)	151 (40.6%)

$x^2 = 21.323$ p = 0.000 df = 1

Figure 15 Prelacteal feeds and early initiation

There was no statistical significance between the age of the mother, occupation of the mother and socioeconomic status.

6.11.1 Age of the mother and early initiation

Table 19 Age of the mother and early initiation

Age of the mother	Upto one hour	More than one hour
≤19	21 (61.8%)	13 (38.2%)
19-30	203 (53.9%)	173 (46.1%)
≥30	21 (52.5%)	19 (47.5%)

$x^2 = 0.827$ p = 0.661 df = 2

6.11.2 Occupation of the mother and early initiation

Table 20 Occupation of the mother and early initiation

Occupation of the mother	Upto one hour	More than one hour
Unskilled worker	5 (71.4%)	2 (28.6%)
Housewives	235 (53.9%)	201 (46.1%)
Skilled worker	5 (71.4%)	2 (28.6%)

$x^2 = 1.681$ p =0.423 df = 2

6.11.3 Socioeconomic status of the mother and early initiation

Table 21 Socioeconomic status of the mother

and early initiation

Socioeconomic status of the mother	Upto one hour	More than one hour
Upper	130 (55.8%)	103 (44.2%)
Middle	85 (55.2%)	69 (44.8%)
Low	30 (47.6%)	33 (52.4%)

$x^2 = 1.389$ p = 0.499 df = 2

There was no statistical significance between the health education given by the health care providers to the mother in the antenatal period, the sex of the baby and person who conducted the delivery and early initiation.

6.11.4 Health education to the mother and early initiation

Table 22 Health education to the mother and early initiation

Health education to the mother	Upto one hour	More than one hour
Yes	140 (52.8%)	125 (47.2%)
No	105 (56.8%)	80 (43.2%)

$x^2 = 0.677$ p = 0.411 df = 1

6.11.5 Sex of the child and early initiation

Table 23 Sex of the child and early initiation

Sex of the child	Upto one hour	More than one hour
Female	126 (54.3%)	106 (45.7%)
Male	99 (45.4%)	119 (54.6%)

$x^2 = 0.03$ p = 0.953 df = 1

6.11.6 Person who conducted the delivery and early initiation

Table 24 Person who conducted the delivery and early initiation

Person who conducted the delivery	Upto one hour	More than one hour
Doctor	192 (54.1%)	163 (45.9%)
Paramedical staff	53 (55.8%)	42 (44.2%)

$x^2 = 0.088$ p = 0.765 df = 1

DISCUSSION

The prevalence of early initiation of breastfeeding in my study is 54.4%. This is more or less similar to the state prevalence (58.8%) as per NFHS-3 data. Though this prevalence of early initiation is higher than the national figure (23.4%), still it is way behind the national target of 80%.

In this study 45.6% of the mothers did not initiate breastfeeding within first one hour after birth. Delay in handing over the baby to the mother was responsible for non-initiation in 43.9% mothers. Babies should be handed over to the mother as soon as possible after birth and the mother should be motivated and assisted in early initiation.

More concerted efforts have to be taken to improve the awareness about early initiation with the help of health education followed by motivation of the mother for early initiation. This would definitely enhance the **care seeking behaviour** of the mothers. The **health providing behaviour** of the health care providers has to be modified by providing them with better training and motivation for implementation of early initiation.

Caesarean section was another important factor which resulted in non-initiation (17.6%). The doctors and paramedical staffs need to play a proactive role in early initiation and motivation of mothers irrespective of the mode of delivery. Maternal complication (19%) and neonatal complication (14.1%) also significantly influenced non-initiation which can be improved by better maternal and child care activities.

There is a significant difference in early initiation between educated and uneducated mothers. In this study group, the educated mothers tend to initiate breast feeding late when compared to the uneducated mothers. The mothers who had primary and middle school education tend to practise early initiation better than mothers who had high school and secondary school education. The prevalence of early initiation was least among graduate mothers. The reasons for this occurrence have to be evaluated by further studies.

The age of the mother, age at marriage and age at conception did not have any statistical significance with early initiation.

The occupation of the mother, occupation of the father and socioeconomic class did not have any statistical significance with early initiation.

The early initiation is 58.85% among mothers who had normal delivery when compared to 47.7% among the mothers who underwent Caesarean section. The early initiation is less in mothers who delivered by Caesarean section which needs to be addressed by effective intervention by health care providers.

There is a statistical significance between early initiation and who initiated breast feeding (p=0.00). The early initiation was higher in mothers in whom the doctors (55%) and paramedical staffs (68.9%) had initiated breast feeding when compared to 41.7% and 52.7% respectively among mothers in whom breast feeding was initiated by mother and other relatives. The health care providers had played a significant role in early initiation and their continued support is essential to achieve universal early initiation.

In this study group, 26.9% mothers were aware of early initiation and only 28% of the mothers were motivated for early initiation by health care providers. The prevalence of early initiation was higher (67.8%) among the mothers who were aware of early initiation when compared to the mothers who were unaware (49.5%). The prevalence of early initiation was higher (72.2%) among mothers who were motivated for

early initiation when compared to mothers who were not motivated (47.5%). There is a significant difference in the early initiation among mothers who are aware about early initiation (p=0.001) and motivated for early initiation and those who were not aware and not motivated. Health education of the mother during antenatal period should be improved by providing better training and motivation for the health care providers.

The health education about breast feeding during antenatal visits, sex of the child, place of delivery and the person who conducted the delivery did not have any significant influence on early initiation.

17.3% of the babies were given prelacteal feeds in this study group which is significantly higher. The early initiation was only 30.8% among babies who were given prelacteal feeds while it was 59.4% among mothers who were not given prelacteal feeds and the difference was statistically significant.

SUMMARY

The descriptive cross sectional study was done among 450 mothers who had babies less than one year of age in zone VI of Chennai Corporation, chosen by simple random method.

A standardized pretested structured questionnaire was used for the study, which included details on background characteristics, marital status and fertility, awareness and motivation for early initiation, details of delivery and causes for non-initiation.

- The prevalence of early initiation of breastfeeding was 54.4% among the study group. Non-initiation was observed in 45.6% mothers.

- The reasons for non-initiation like delay in handing over the baby to the mother, Caesarean section, maternal complication and neonatal complication were found to be 43.9%, 17.6%, 19% and 14.1% respectively. Most of the reasons for non-initiation are preventable and can be effectively tackled by ensuring good maternal and child health care. The health care providers who are in the delivery room and the hospital should be trained and motivated to implement early initiation of breastfeeding.

- The education of the mother, awareness about early initiation and motivation for early initiation has a significant impact on early initiation.

- The mode of delivery and the person who initiated the breast feeding also influenced early initiation.

- The administration of prelacteal feeds has an adverse impact on early initiation.

- There was no statistical significance observed between age of the mother, occupation of mother, socioeconomic class, age at marriage and age at conception.

- Similarly, health education during antenatal period, sex of the child, place of delivery, person who conducted the delivery, person who initiated the breast feeding, artificial feed and support from family members did not have any significant impact on early initiation.

LIMITATIONS

1. Only mothers who had babies born as term at birth less than one year of age were included.

2. Since the data was collected more than six months after delivery from a section of the mothers in the study group, the issue of recall bias may arise. However, since the delivery and breast feeding the baby for the first time is a vital event in a mother's life, most of the mothers were able to recall the sequence of events in a vivid manner.

RECOMMENDATIONS

From this study, I would like to make the following recommendations.

- More attention has to be paid for educating the mothers about advantages of early initiation so that their care seeking behaviour could be modified.

- The care providing behaviour of the health care providers should be enhanced through better training and motivation so that early initiation can be implemented in a more efficient and successful manner.

- The training and motivation for early initiation should not only involve the mother but also the family members who have an influence on the mother's decision making process. The involvement of the family members is crucial since it influences the decision making process of the family as a whole as well as the decision making by the mother herself.

- The person who conducts the delivery or the personnel who are in the labour room at the time delivery should ensure that

the baby is put to breast after delivery within first one hour after delivery.

- Early initiation should be done as quickly as possible after delivery so that the time delay in handing over the baby to the mother can be prevented.

- Strict avoidance of prelacteal feeds should be advocated.

- There should be better coordination between the health care providers, mother and the family members to promote and ensure successful initiation of breast feeding within first one hour after birth and followed by exclusive breast feeding for six months and partial breastfeeding later on upto two years of age.

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ANNEXURE I

KUPPUSWAMY'S SOCIOECONOMIC STATUS SCALE

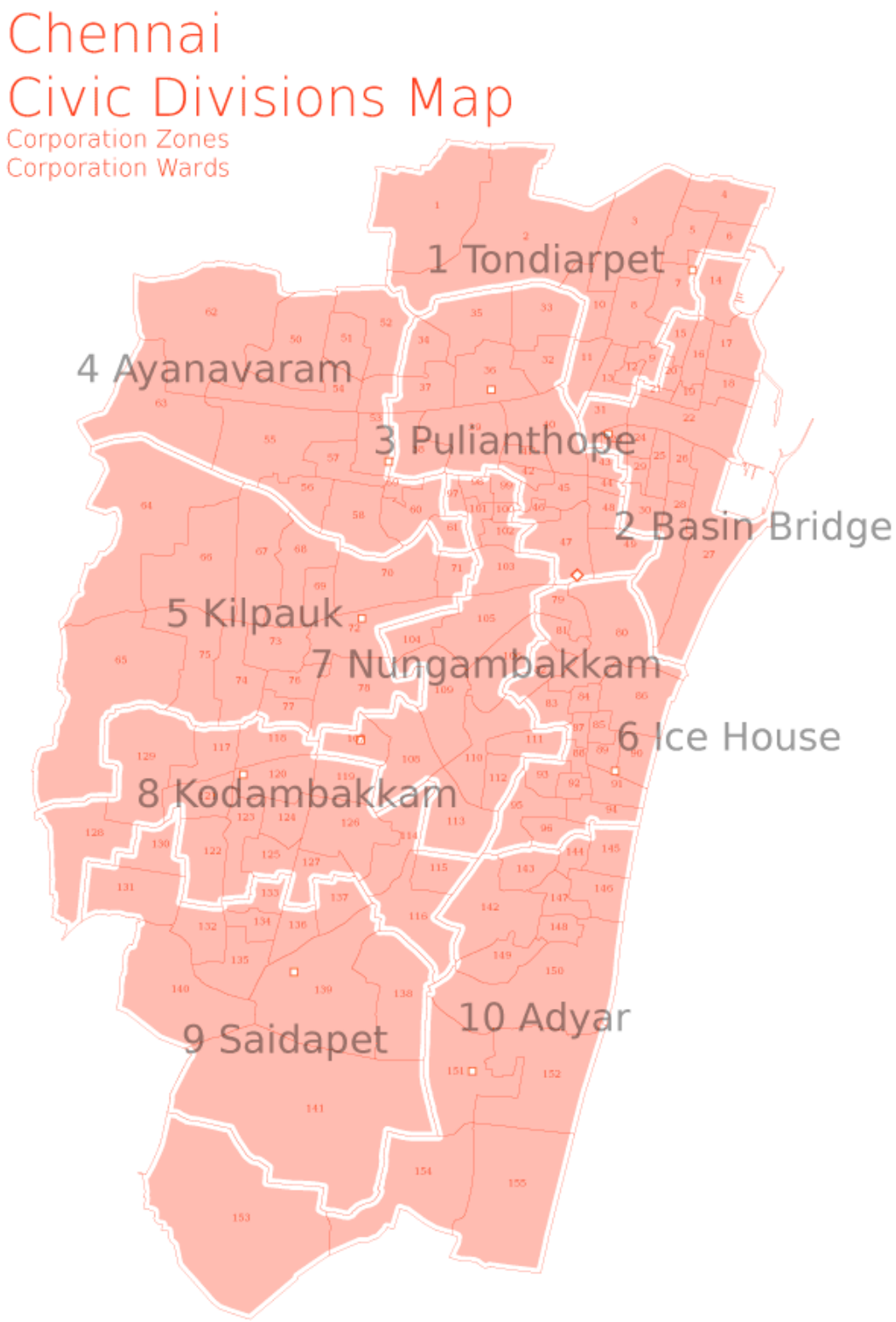
S.No	(A) Education	Score
1	Profession or Honours	7
2	Graduate or post graduate	6
3	Intermediate or post high school diploma	5
4	High school certificate	4
5	Middle school certificate	3
6	Primary school certificate	2
7	Illiterate	1

S.No	(B) Occupation	Score
1	Profession	10
2	Semi-Profession	6
3	Clerk, Shop-owner	5
4	Skilled worker	4
5	Semi-skilled worker	3
6	Unskilled worker	2
7	Unemployed	1

S.No	(C) Family income per month(in Rs)- original	Score
1	≥19575	12
2	9788-19574	10
3	7323- 9787	6
4	4894- 7322	4
5	2936-4893	3
6	980-2935	2
7	≤979	1

Total Score	Socioeconomic class
26-29	Upper (I)
16-25	Upper Middle (II)
11-15	Lower Middle (III)
5-10	Upper Lower (IV)
<5	Lower (V)

ANNEXURE - II


Chennai
Civic Divisions Map
Corporation Zones
Corporation Wards
1 Tondiarpet
2 Basin Bridge
3 Pulianthope
4 Ayanavaram
5 Kilpauk
6 Ice House
7 Nungambakkam
8 Kodambakkam
9 Saidapet
10 Adyar

ANNEXURE III

1.1 LIST OF ZONES IN CHENNAI CORPORATION:

Tondiarpet

Basin bridge

Pulianthope

Ayanavaran

Kilpauk

Ice house

Nungambakkam

Kodambakkam

Saidapet

Adyar

1.2 DIVISIONS OF ZONE VI:

Adikesavapuram

Nehru Nagar

Chintadripet

Komaleeswarnpet

Balasubramaniam Nagar

Thiruvotteeswaranpet

Dr. Natesan Nagar

Chepauk

Zam Bazaar

Umarupulavar Nagar

Thiruvallikeni

Marina

Krishnampet

Bharathi Nagar

Azad nagar (north)

Bharathidasan Nagar

Azad Nagar (south)

Vivekanandapuram

ANNEXURE IVA

QUESTIONNARE – ENGLISH VERSION

S.No:	
Name:	**Age:**
Spouse Name:	**Age:**
Address :	

Introduction

"How do you do? I am (name) ..... of (name of the institution). I am conducting a survey on the early initiation of breastfeeding in your community. I have several questions to ask you. I know you are very busy. But it will not take very long.

And I would appreciate it very much if you would help us by answering these questions. I assure you that your answers will be kept confidential and solely for research purposes. Firstly I would like to know about your educational status and then we will move on to several other questions."

Background characteristics of the respondent :

A1. Educational status of the mother:

1) Primary [1-5] 2) Middle [6-8] 3) High [9-10]
4) Secondary [11-12] 5) Graduate 6) Illiterate

A2. Educational status of the father:

1) Primary [1-5] 2) Middle [6-8] 3) High [9-10]
4) Secondary [11-12] 5) Graduate 6) Illiterate

A3. Occupation of the mother:

1) Unemployed 2) Unskilled worker
3) Semiskilled worker 4) Skilled worker 5. Clerk / Shop owner
6) Semi-professional 7) Professional

A4. Occupation of the father:

1) Unemployed 2) Unskilled worker
3) Semiskilled worker 4) Skilled worker
5) Clerk/Shop owner 6) Semi-professional 7) Professional

A5. Religion: 1. Hindu 2. Muslim 3. Christian

A6. Social class:

1) Upper 2) Upper middle 3) lower middle
4) Upper lower 5) lower

Marital status:

B1. What is your current marital status?

1) Single 2) Married 3) Widowed
4) Separated 5) Divorced

B2. At what age did you get married? …….

B3. What was your age at first conception? ……

B4. How many children you had given birth to, including those who had survived briefly? ….....

B5. No. of male children: ……..... No. of female children: …….....

Antenatal history for the present delivery :

C1. Did any doctor or health worker talk to you about breastfeeding during antenatal checkups? Yes / No

C2. Where you aware of the advantages of breastfeeding? Yes / No

C3. Was any breast examination done in the antenatal period? Yes / No

C4. Did any of your family members talk to you about breastfeeding? Yes / No

Details of delivery :

D1. Male …… Female……. Age in months..... .....

D2. Where was the delivery conducted?

1) Institution 2) Home

D3. Mode of delivery: 1. Normal 2. Forceps 3.Caesarean section

D4. Did the baby cry immediately after birth? Yes / No

D5. Who conducted the delivery?

1. Doctor 2. Auxiliary Nurse Midwife
3. Multipurpose health worker 4. Nurse 5. Others

D6. Date of birth: …..…….....Time .....……..

Details of early initiation of breastfeeding within first one hour of delivery:

E1. When did you first breastfeed your baby after delivery?

1. Within first one hour 2. Within 24 hours
3. After 24 hours

E2. Who initiated the breast feeding?

1. Doctor 2. Auxiliary Nurse Midwife
3. Female Nursing Assistant 4. Mother
5. Mother in law 6. Sister
7. Sister in law 8. Self 9. Others

E3. If breastfeeding was not initiated within first one hour after birth, what was the reason for non-initiation?

Unaware

Not interested

Social norms and belief

Misconception that mother may not be able to produce enough of milk

Misconception that colostrum is harmful to the baby

Prelacteal feed

Caesarean section

Lack of support from health care providers

Any breast problems

Any neonatal complication

Any maternal illness or complication

Delay in handing over the baby to the mother

E4. Were you aware of early initiation of breastfeeding within first one hour after birth? Yes / No

E5. Did any healthcare provider motivate for early initiation of breastfeeding? Yes / No

E6. Did your family members motivate you for early initiation of breastfeeding? Yes / No

E7. Was there any difficulty in initiating breast feeding? Yes / No

E8. Was any prelacteal feeds given to the child? Yes / No

E9. How long did you give exclusive breastfeeding? (Only for mothers who have babies more than 6 months of age) .....

E10. Did you give any tinned food? Yes / No

E11. Did your family members insist on tinned food? Yes / No

“Thank you very much for participating in the study.”

Nfs;tpg;gbtk;

t.vz;.

ngah; : taJ :

fzthpd; ngah; : taJ :

Kfthp :

m. gjpy; mspg;gth; gw;wpa tptuk; :

1. jq;fspd; fy;tp epiy vd;d?
   1. Muk;gf;fy;tp 2. ,ilepiyf;fy;tp
   3. cah;epiyf;fy;tp 4. Nky;epiyf;fy;tp
   5. gl;lg;gbg;G 6. fy;tpawptpy;yhjth;
2. jq;fspd; fzthpd; fy;tp epiy vd;d?
   1. Muk;gf;fy;tp 2. ,ilepiyf;fy;tp
   3. cah;epiyf;fy;tp 4. Nky;epiyf;fy;tp
   5. gl;lg;gbg;G 6. fy;tpawptpy;yhjth;
3. jhapd; njhopy; jpwd; :
   1. Ntiyapy;yhjth; 2. El;gk; rhuh njhopyhsp
   3. ,y;yj;jurp 4. El;gk; rhh;e;j njhopyhsp
   5. tpahghhp / cjtpahsh;
   6. ,ilgl;l me;j];Js;s njhopy;El;g ty;Ydh;
   7. cah;e;j me;j];Js;s njhopy;El;g ty;Ydh;
4. je;ijapd; njhopy; jpwd; :
   1. Ntiyapy;yhjth; 2. El;gk; rhuh njhopyhsp

3. gFjp El;gk; rhu;e;j njhopyhsp

4. El;gk; rhh;e;j njhopyhsp 5. tpahghhp / cjtpahsh;

6. ,ilgl;l me;j];Js;s njhopy;El;g ty;Ydh;

7. cah;e;j me;j];Js;s njhopy;El;g ty;Ydh;

5. kjk; :

1. ,e;J 2. K];yPk; 3. fpwp];jth;

6. nghUshjhu epiy:

1. cah;e;j epiy 2. cah;,ilepiy 3. jho;,ilepiy

4. cah;jho;epiy 5. jho;epiy

M. jpUkzepiy

1. jq;fsJ jpUkzepiy :

1. jdpegh; 2. jpUkzkhdth; 3. tpjit

4. fzthplk; ,Ue;J gphpe;J tho;gth;

5. tpthfuj;J Mdth;

2. jq;fSf;F ve;j tajpy; jpUkzkhdJ ? .....

3. jhq;fs; ve;j tajpy; Kjy; Kiwahf fh;g;gk; mile;jPHfs;? .....

4. jq;fSf;F vj;jid Foe;ijfs; cs;sd (Fiwe;j fhyk; kl;Lk; capUld; ,Ue;j Foe;ijfisAk; Nrh;j;J)? .....

5. Mz;Foe;ij ..... ngz; Foe;ij .....

,. ,e;j gpurtj;jpd; gpurt Kd; fhyk; gw;wpa tptuk; :

1. jhq;fs; fh;g;g Kd;fhy kUj;Jt ghpNrhjidf;F nrd;w nghOJ kUj;Jth; my;yJ Rfhjhu nrtpypah; vtNuDk; jq;fsplk; jha;g;ghypd; Kf;fpaj;Jtj;jpid gw;wp Ngrpdhh;fsh? Mk; / ,y;iy.

2. jha;g;ghypd; Kf;fpaj;Jtk; kw;Wk; mjd; ed;ikfs; gw;wp jhq;fs; mwpe;J ,Ue;jPHfsh? Mk; / ,y;iy.

3. khh;gfq;fs; ghpNrhjid nra;ag;gl;ldth? Mk; / ,y;iy.

4. jq;fs; FLk;g mq;fj;jpdh;fs; vtNuDk; jha;g;ghypd; Kf;fpaj;Jtj;jpid gw;wp Ngrpdhh;fsh? Mk; / ,y;iy.

<. ,e;j gpurtj;jpidg; gw;wpa tptuk; :

1. Foe;ij : Mz;/ngz; taJ : .....

2. gpurtk; vq;F ele;jJ?

1) kUj;Jtkid 2) tPL

3. gpurt Kiw :

1) Rfg;gpurtk; 2) MAjj;jpd; cjtpAld; gpurtk;

3) mWit rpfpr;ir

4. Foe;ij gpwe;jTld; mOjjh? Mk; / ,y;iy.

5. ahh; gpurtk; ghh;j;jhh;fs; ?

1) kUj;Jth; 2) kfg;NgW cjtp nrtpypah;

3) gy Nehf;F Rfhjhu nrtpypah; 4) nrtpypah;

5) kw;wth;.

6. gpwe;j Neuk; ..... gpwe;j Njjp : .....

c. Foe;ij gpwe;jTld; jha;g;ghy; nfhLf;fg;gl;l tptuk; :

1. Foe;ijf;F Kjy; Kiwahf vg;nghOJ jha;g;ghy; nfhLj;jPHfs;

1. xU kzp Neuj;jpw;F Kd;

2. xU kzp Neuk; Kjy; ,Ugj;jpdhd;F kzp Neuk; tiu.

3. ,Ugj;jpdhd;F kzp Neuj;jpw;F gpd;

2. Kjd; Kjy; jha;g;ghy; nfhLg;gjw;F ahh; cjtpdhh;fs;?

1. kUj;Jth; 2. kfg;NgW cjtp nrtpypah;

3. kfg;NgW cjtpahsh; 4. jha; 5. khkpahh;

6. rNfhjhp 7. ehj;jdhh;

8. jhdhf Muk;gpj;jJ 9. kw;wth;.

3. Foe;ij gpwe;J xU kzp Neuj;jpw;Fs; jha;g;ghy; nfhLf;fhjjw;fhd fhuzk; :

1) mwpahik

2) tpUg;gk; ,y;iy

3) r%f Nfhl;ghLfs; kw;Wk; ek;gpf;iffs;

4) NghJkhd ghy; Rug;gjpy;iy

5) rPk;ghy; Foe;ijf;F NfL

6) jha;g;ghy; jtpu kw;w czT

7) mWit rpfpr;ir

8) kUj;Jt Nrit mspg;gth;fspd; Nghjpa cjtp ,y;iy.

9) khh;gpy; gpur;rid

10) gr;rpsq;Foe;ij gUtj;jpy; Vw;gLk; Neha;fs

11) jhapd; cly; eyf;FiwT

12) Foe;ijia jhaplk; jUtjpy; jhkjk;

4. Foe;ijf;F gpwe;j Kjy; xU kzp Neuj;jpw;Fs; jha;g;ghy; nfhLf;f Ntz;Lk; vd;gijg; gw;wp jhq;fs; mwpe;jPUf;fPHfsh? Mk; / ,y;iy.

5. Foe;ij gpwe;j Kjy; xU kzp Neuj;jpw;Fs; jha;g;ghy; nfhLf;f kUj;Jth; kw;Wk; nrtpypah; vtNuDk; Cf;fk; mspj;jduh?
Mk; / ,y;iy.

6. jq;fsJ FLk;g cWg;gpdh;fs; Foe;ij gpwe;J Kjy; xU kzp Neuj;jpw;Fs; jha;g;ghy; nfhLf;f Cf;fk; mspj;jduh?
Mk; / ,y;iy.

7. jha;g;ghy; nfhLg;gjpy; jq;fSf;F VNjDk; gpur;rid ,Ue;jjh?
Mk; / ,y;iy

8. jha;g;ghy; nfhLg;gjw;F Kd; NtW VNjDk; czT nfhLf;fg;gl;ljh?
Mk; / ,y;iy

9. jq;fs; Foe;ijf;F vt;tsT fhyk; jha;g;ghy; kl;Lk; nfhLj;jPHfs; (MW khjj;jpw;F Nkw;g;gl;l Foe;ijfSf;F kl;Lk;)? .....

10. jq;fs; Foe;ijf;F nraw;if czT mspj;jPHfsh?
Mk; / ,y;iy

11. jq;fsJ FLk;g cWg;gpdh;fs; Foe;ijf;F nraw;if czT nfhLf;f fl;lhag;gLj;jpdhh;fsh?
Mk; / ,y;iy

C. **"cq;fs; MjuTf;F vq;fspd; kdkhh;e;j ed;wp"!**